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Global methodology for assessing and reporting runway surface conditions

ICAO ESAF

Regional Office Nairobi

Kigali Rwanda 23/24 Jan 2020





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Overview

- Stakeholder responsibilities
- Dissemination of information



Stakeholder responsibilities

- **Aerodrome operators:** assess the runway surface conditions, including contaminants, for each third of the runway length, and report them by means of a uniform runway condition report (RCR)
- **Air traffic services (ATS):** convey the information received via the RCR and/or special air-reports (AIREP) to end users (voice communications, ATIS, CPDLC)
- **Aeronautical information services (AIS):** provide the information received in the RCR to end users (SNOWTAM)
- **Aircraft operators:** utilize the information in conjunction with the performance data provided by the aircraft manufacturers to determine if landing or take-off operations can be conducted safely and provide runway braking action special air-reports (AIREP)
- **Aircraft Manufacturers** provide the necessary performance data in the aeroplane flight manual



Dissemination of information

- **Through the AIS and ATS services:** when the runway is wholly or partly contaminated by **standing water**, snow, slush, ice or frost, or is wet associated with the clearing or treatment of snow, slush, ice or frost.
- **Through the ATS only:** when the runway is wet, not associated with the presence of standing water, snow, slush, ice or frost.





Means of communication

**Means of communication
are:**

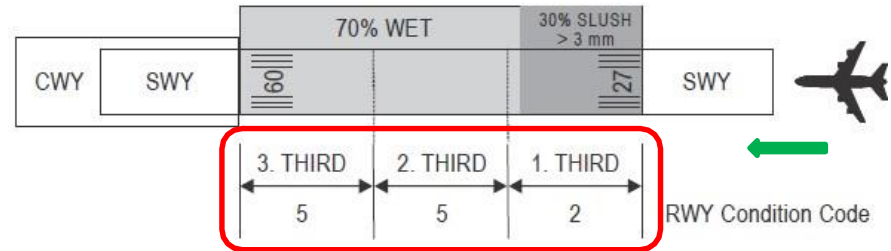
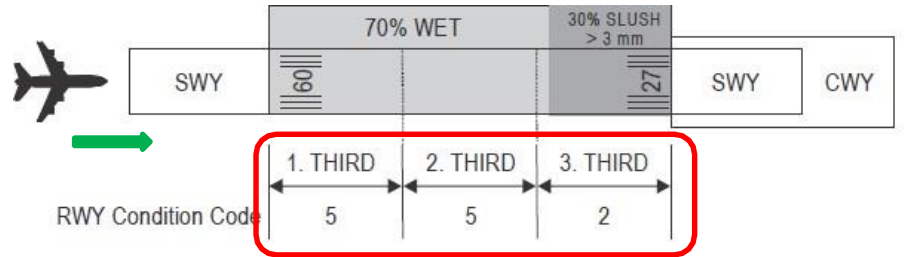
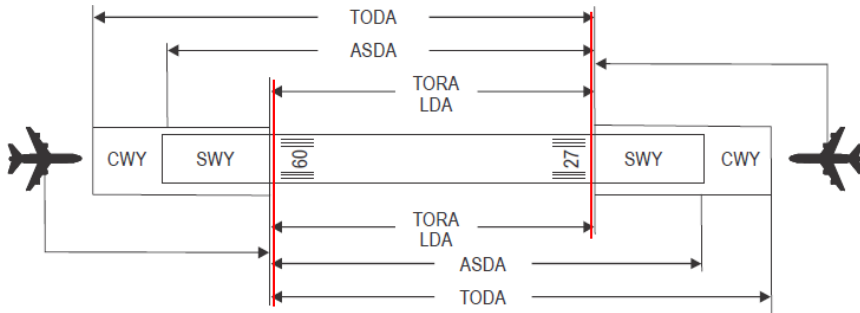
- ATC and ATIS
- SNOWTAM





Reporting of RWYCC from ATS to flight crew

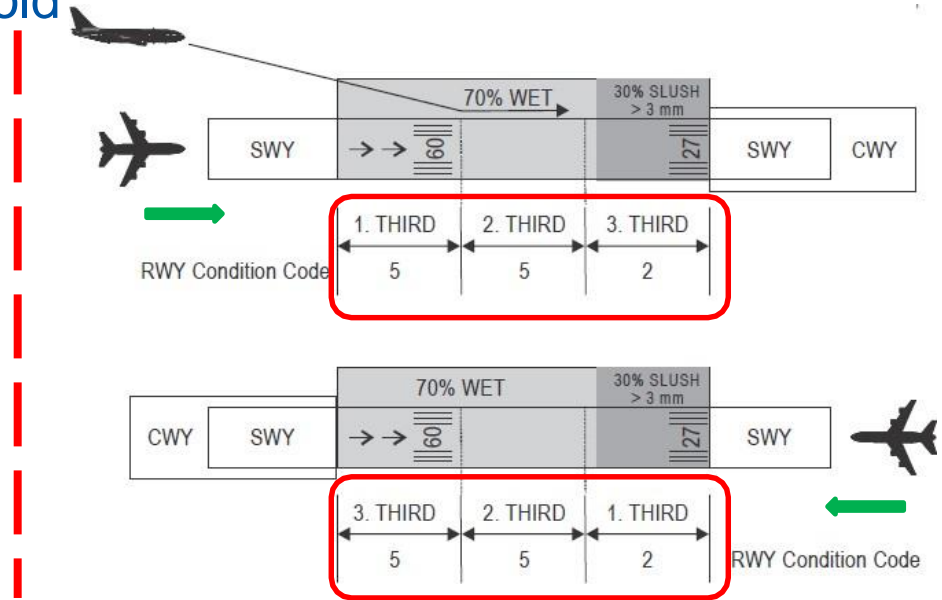
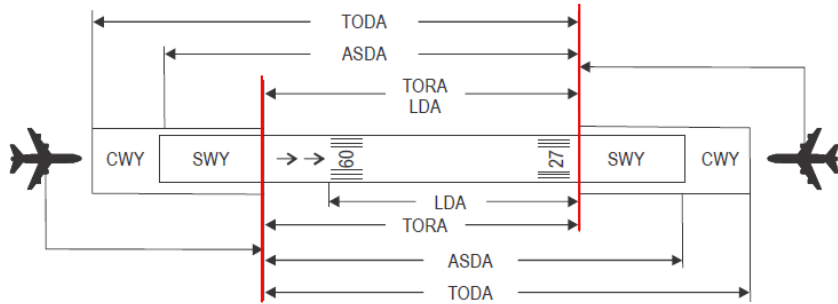
Reporting of runway condition code from ATS to flight crew for runway thirds





Reporting of RWYCC from ATS to flight crew

Reporting of runway condition code for runway thirds from ATS to flight crew on a runway with displaced threshold





Reporting from flight crew to ATS

- The pilot-in-command shall / should **report the runway braking action special air-report (AIREP)** when the runway braking action encountered is not as good as reported.
- *When receiving special air-reports by voice communications concerning braking action encountered that is not as good as that reported, air traffic service units shall forward them without delay to the appropriate aerodrome operator.*





ATIS

In addition to normal operational and weather information, the following information should be mentioned about the runway condition whenever runway is not dry (RWYCC 6)

Performance section

- operational runway in use at time of the issuance;
- RWYCC for operational RWY for each third in the operational direction;
- condition description, coverage and depth (for loose contaminant);
- width of the operational RWY to which RWYCC apply if less than published;
- reduced length if less than published;

Situational awareness section

- loose sand;
- RWY exits, taxiways and apron if POOR; and
- any other remarkable information in short plain language.



SNOWTAM

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)				<E
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)				<E
(Abbreviated heading)	(SWAA* SERIAL NUMBER)			(LOCATION INDICATOR)	DATE/TIME OF ASSESSMENT	(OPTIONAL GROUP)
	S	W	* *			<E(

SNOWTAM → (Serial number) <E

Aeroplane performance calculation section			
(AERODROME LOCATION INDICATOR)	M	A)	<E
(DATE/TIME OF ASSESSMENT <i>(Time of completion of assessment in UTC)</i>)	M	B)	→
(LOWER RUNWAY DESIGNATION NUMBER)	M	C)	→
(RUNWAY CONDITION CODE (RWYCC) ON EACH -RUNWAY THIRD) <i>(From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)</i>	M	D)	/ / →
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)	C	E)	/ / →
(DEPTH (mm) OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)	C	F)	/ / →
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH) <i>(Observed on each runway third, starting from threshold having the lower runway designation number)</i>	M	G)	/ /
COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE			→



SNOWTAM

(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)	O	H)	←
Situational awareness section			
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (m))	O	I)	→
(DRIFTING SNOW ON THE RUNWAY)	O	J)	→
(LOOSE SAND ON THE RUNWAY)	O	K)	→
(CHEMICAL TREATMENT ON THE RUNWAY)	O	L)	→
(SNOWBANKS ON THE RUNWAY) <i>(If present, distance from runway centre line (m) followed by "L", "R" or "LR" as applicable)</i>	O	M)	→
(SNOWBANKS ON A TAXIWAY)	O	N)	→
(SNOWBANKS ADJACENT TO THE RUNWAY)	O	O)	→
(TAXIWAY CONDITIONS)	O	P)	→
(APRON CONDITIONS)	O	R)	→
(MEASURED FRICTION COEFFICIENT)	O	S)	→
(PLAIN-LANGUAGE REMARKS)	O	T))
<p>NOTES:</p> <ol style="list-style-type: none"> *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier. Information on other runways, repeat from B to H. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported. Words in brackets () not to be transmitted. For letters A) to T) refer to the <i>Instructions for the completion of the SNOWTAM Format</i>, paragraph 1, item b). 			

SIGNATURE OF ORIGINATOR (not for transmission)



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Asia and Pacific
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Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU